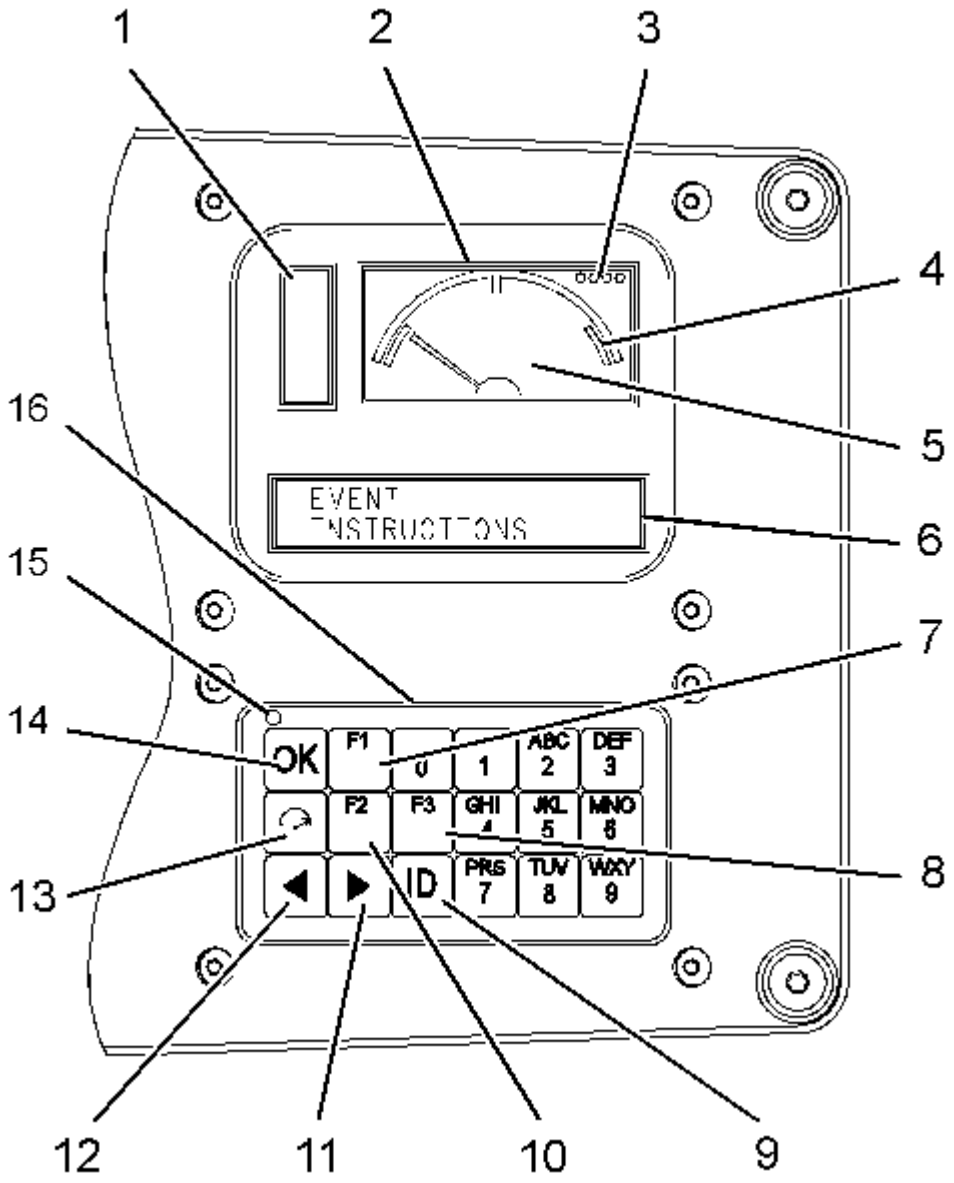
Operation and Maintenance Manual
784C and 785C Off-Highway Truck/Tractor

Vital Information Management System (VIMS) Keypad



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(1) Alert indicator

(2) Message center module

(3) Data logging indicator

(4) Gauge warning area

(5) Universal gauge

(6) Message area

(7) "F1" key

(8) "F3" key

(9) "ID" key

(10) "F2" key

(11) Forward key

(12) Backward key

(13) "GAUGE" key

(14) "OK" key

(15) Indicator light

(16) Keypad

The Vital Information Management System (VIMS) uses keypad (16) to allow the operator to request information. The keypad controls the display of text in message area (6) .

Indicator light (1) will flash whenever a key is pressed. The indicator light informs the operator that the command has been accepted.

Some information can be requested by using the numbers on the keypad . The series of numbers is called a Service Program Code. The letters that are associated with the numbers describe the requested operation of the Service Program Codes.

Note: After entering the Service Program Code on the keypad, the code must be completed by pressing "OK" key (14) .

The following table contains the Service Program Codes that are needed by the operator. Refer to Service Manual, RENR2630 and RENR2631, "785 - 797 Off-Highway Trucks Vital Information Management System" for additional Service Program Codes.

Table 1

Service Program Codes		
Numbers	**Letters**	**Description**
52	LA	Change the Language.
86	UN	Metric Units or English Units
868	TOT	View the Cumulative Data.
73738	RESET	Reset the Cumulative Data.
3564	DLOG	Log the Data or Stop Logging the Data.
8378	TEST	Test of the VIMS
258	BLT	Backlighting Intensity of the Message Area
266	CON	Contrast of the Message Center

LA - Entering 52 causes the text in the message area to toggle between two languages.

UN - Entering 86 toggles between Metric units and English units.

TOT - Entering 868 shows the total number of loads, the total payload, the total travel distance, and the total travel time. This data is called the cumulative data. The cumulative data can be reset. The totals since the last reset will be listed. Scroll through the list with Forward key (11) and with Backward key (12) .

RESET - Entering 73738 clears the cumulative data.

DLOG - Entering 3564 will cause the VIMS to start logging data. If the VIMS is already logging data, entering 3564 will cause the VIMS to stop logging data. Data logging indicator (3) will be ON when the VIMS is logging data. The data from all of the parameters will be recorded. The data is stored in a file and the file can be downloaded by using the VIMS-PC software for analysis of the machine systems.

TEST - Entering 8378 will run the self test of the VIMS. Refer to Operation And Maintenance Manual, "Vital Information Management System (VIMS)" for additional information about the self test of the VIMS.

BLT - Entering 258 will cause the intensity of the message area to begin scrolling by 5 percent increments. The corresponding percentage of the intensity is displayed in the message area. Use Backward key (12) and Forward key (11) in order to select the desired intensity. Press "OK" key (8) in order to accept the new selection.

CON - Entering 266 will cause the contrast of the message area to begin scrolling by 5 percent increments. The corresponding percentage of the contrast is displayed in the message area. Use Backward key (12) and Forward key (11) in order to select the desired intensity. Press "OK" key (14) in order to accept the new selection.

Keys

"OK" Key

"OK" key (14) is used in order to indicate that entries are complete. This key is also used in order to acknowledge all events.

"F1" Key

"F1" key (7) is used by the operator in order to request additional information about a data event.

There are two types of events. Data events warn the operator that the value of a monitored parameter is not in the specified range. Maintenance events warn the operator about electrical problems.

When a data event is displayed in message area (6) , pressing the "F1" key will show the actual data about the condition. For example, if the condition is high temperature, pressing the "F1" key will show the value of the temperature.

When a maintenance event is displayed in the message area, pressing the "F1" key will display the diagnostic code information. See Service Manual, RENR2630 and RENR2631, "785 - 797 Off-Highway Trucks Vital Information Management System" and Special Instruction, REHS0126,

"Caterpillar Electronic Control Codes"for a complete list of MID values, of CID values and of FMI values.

Note: The switches do not have any CID or FMI diagnostic information. The message area will show the state of the switch. Some examples of information that will be shown on the message area are "CLOSED", "OPEN", "NEUTRAL" and "UP".

Forward Key and Backward Key

Backward key (12) and Forward key (11) allow scrolling forward or backward in order to display rows of text in message area (6) .

"GAUGE" Key

"GAUGE" key (13) is used to determine the measured value of a particular parameter. The value will be shown in message area (6) . The value will also be shown on universal gauge (5) in message center module (2) .

When the "GAUGE" key is pressed, the following information is shown in the message center module:

- The name of the parameter and the ID of the parameter are displayed in the first row of text.
- The value of the parameter and the corresponding units are displayed in the second row of text.
- The universal gauge displays the value on an analog gauge.

This information is shown for one parameter at a time. Use the Forward key and the Backward key to scroll through the available parameters.

Each parameter has an identification number so that specific information can be requested. To view specific parameter information, enter the identification number. Then press the "GAUGE" key.

Parameter information remains on the message center until "OK" key (14) is pressed. Default data (time of day and service meter hours) is then shown.

The following items are the available parameters and the corresponding identification numbers of the parameters:

Note: The parameters that are available on individual machines may differ slightly.

Table 2

Parameter Information of the VIMS	
Name of the Parameter	**Identification Number of the Parameter**
Eng Spd	100
Lt Trbo In Pres	102
Rt Trbo In Pres	103

Air Fltr	104
Boost Pres	105
Lt Exh Temp	106
Rt-Lt Exh Temp	107
Rt Exh Temp	108
F Aftclr Temp	111
R Aftclr Temp	112
Wastegate Pos	114
Cool Fan Spd	115
Cold Mode	116
Eng Derate	117
Air Fltr	118
Eng Load	121
Fuel Fltr	122
Fuel Lvl	123
Throttl Pos	125
Eng Fuel Rate	129
Eng Oil Lvl	130
Eng Oil Pres	131
Cnkcase Pres	133
Eng Cool Flow	134
Eng Cool Temp	135
Aftclr Lvl	137
Eng Cool Lvl	138
Sys Voltage	140
Hi Boost Pres	145
Lo Boost Pres	146
Cnkcase Pres	147

Total Fuel	187
Eng Fan Spd #1	197
Eng Fan Spd #2	198
Rt-Lt Fan Spd	199
Eng Fan Temp	200
RAX Dvrt Sol St	229
TC Filter	310
TC Out Spd	311
TC Screen	312
TC Out Temp	313
Diff Temp	325
Diff Fltr Sw	327
Diff Lube Pres	328
Trn Lockout St	340
Trn Gear	349
Trn Lube Temp	350
Gear Select	351
Actual Gear	352
Trn Out Spd	355
Trn Chrg Fltr	356
Trn Lube Fltr	357
Trn Slip	358
Lckup Slip	359
Brk Pump Spd	377
Retarder	380
Brk Lockdn	382
Lt R Wheel Spd	418
Rt R Wheel Spd	419

Mach Lock Sw	432
RtR-RtF BrkTemp	436
LtR-LtF BrkTemp	437
Strg Pmp Pres	440
Lo Strg Pres	441
Hi Strg Pres	442
Strg Oil Temp	444
Brk/Air Pres	452
ParkBrk	453
Brk Fltr	454
Brk Stroke	456
Lt F Brk Temp	460
Lt R Brk Temp	461
Rt F Brk Temp	462
Rt R Brk Temp	463
RtF-Ltf Brk Temp	464
RtR-LtR Brk Temp	465
ParkBk FltrSw	466
Eng Oil Fltr	485
ParkBk Fltr Sw	493
Hoist Screen	505
Diff Oil Lvl	513
Eng Fan Spd	520
RtF-LtF Susp Cyl	710
RtR-LtR Susp Cyl	711
Lt F Susp Cyl	720
Lt R Susp Cyl	721
Rt F Susp Cyl	722

Rt R Susp Cyl	723
Body Angle	724
Ground Spd	725
Body Pos	726
Body Lvr	727
Payload	728
Payload Status	729
Haul Distance	730
User Shutdown	742
Auto Lube	751
Atmos Pres	790
Amb Air Temp	791
Machine Pitch	792
Machine Rack	793
Hoist Lvr Pos	798
Hoist Status	799
VIMS Event List	800
Payload Data	801
VIMS Snapshot	802
Diff Pres Lo	812
Max Bias/Sec	849
Max Pitch/Sec	850
Max Rack/Sec	851
Cycle P Fela	852
Manual Erec	860
Cycle R Fela	862
Fela Trigger	869
Lo Oil Pres	907

Tkph F Tires	983
Tkph R Tires	984
Tkph F Warn	986
Tkph R Warn	987
Trn Oil Lvl	1022
Retatder Mode	1023

If an event occurs, the message area will display information about the event. After the problem is corrected, the display in the message area will revert to the former display. Events will always override parameter values.

"ID" Key

"ID" key (9) is used to enter the operator's identification number.

If this is required, this identification number should be entered at the beginning of an operator's shift.

When the "ID" key is pressed, a prompt for "ENTER ID" will be shown on the first row of text in the message area. The operator may enter an ID number up to seven digits long on the second row.

If "OK" key (14) is not pressed within five seconds after the last number is entered, the identification number will not be recorded. Then, the display will return to the previous condition.

If the "ID" key is pressed during the entry, the current entry will be cancelled and the process will start again. This is helpful if a mistake is made during the entry. Backward key (23) will delete the last number of the entry.

"F2" Key and "F3" Key

"F2" key (10) and "F3" key (8) are not currently used in this application.